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CIA Is Skeptical that New Soviet Radar Is Part of an ABM Defense System

U.S. and British intelligence experts question Administration charges that the radar under construction in Krasnoyarsk may be part of a Soviet missile defense.

BY MICHAEL R. GORDON

Until recently, Krasnoyarsk did not make a lot of news. A stopping off point on the Trans-Siberian Railroad, Krasnoyarsk lies some 2,100 miles east of Moscow and is the birthplace of Soviet leader Konstantin U. Chernenko. But among defense experts, Krasnoyarsk is well known for the phased-array radar which is under construction near the city.

That radar has become exhibit A for Administration hard-liners who have charged that the Soviet Union may be moving to a nationwide antiballistic missile system in violation of the ABM treaty.

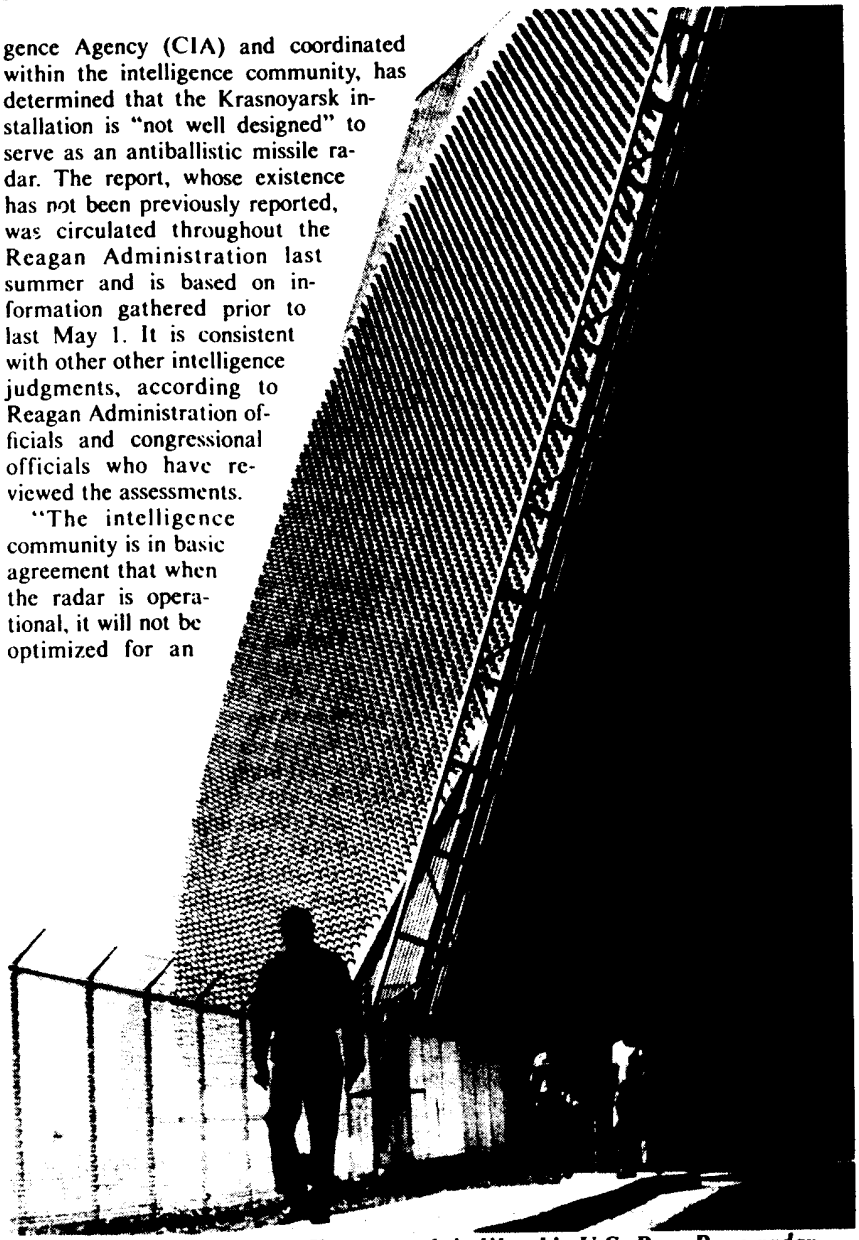
Citing the radar and other alleged violations of the ABM treaty, the White House, in its Feb. 1 unclassified report on Soviet "noncompliance" with the treaty, noted that "the aggregate of the Soviet Union's ABM and ABM-related actions suggest that the USSR may be preparing an ABM defense of its national territory."

"The Krasnoyarsk radar is very appropriately located for ballistic missile defense," Richard N. Perle, assistant Defense secretary for international security policy, told the Senate Armed Services Committee last year. In addition to providing the capability to provide early warning of a U.S. attack, Perle said, the radar may have "capabilities for ABM battle management functions."

Moscow has been violating the ABM Treaty by "constructing a major ABM radar at Krasnoyarsk" the Heritage Foundation charged in its 1984 *Mandate for Leadership.*

But the U.S. intelligence community, significantly, has described the radar in less than ominous terms. A classified 1984 assessment entitled "Implications of a New Soviet Phased-Array Radar," which was drafted by the Central Intelligence Agency (CIA) and coordinated within the intelligence community, has determined that the Krasnoyarsk installation is "not well designed" to serve as an antiballistic missile radar. The report, whose existence has not been previously reported, was circulated throughout the Reagan Administration last summer and is based on information gathered prior to last May 1. It is consistent with other other intelligence judgments, according to Reagan Administration officials and congressional officials who have reviewed the assessments.

"The intelligence community is in basic agreement that when the radar is operational, it will not be optimized for an



The phased-array radar at Krasnoyarsk is like this U.S. Pave Paws radar.

Not the Only Case

The Krasnoyarsk radar installation is not the only piece of evidence for the White House's contention that the Soviet Union "may be preparing an ABM [antiballistic missile] defense of its national territory." In fact, the radar in Siberia is but one of three specific Soviet activities cited by the Reagan Administration in an unclassified report made public to buttress its claim, and other evidence is cited in the classified version of the report. But a review of the charges shows that in one case, progress has been made toward resolving some concerns. In the others, the evidence is not clear-cut.

In addition to the Krasnoyarsk radar, the White House charge is based on the complaint that the Soviet Union may have violated the ABM treaty through tests of its air defense radars in an "ABM mode" by turning on the radars at the same time it was carrying out permissible ABM tests at a central Asian range near the Chinese border. Such a practice might allow the Soviets to give their air defense radars the capability to guide interceptor missiles against incoming warheads. This, in turn, would permit it to circumvent the ABM treaty, which restricts each side to defense of a single site and places no restriction on the location or number of air defense radars.

Officials say that U.S. and Soviet representatives at the Standing Consultative Commission, set up to monitor compliance issues, worked out an understanding to guard against such "concurrent" operations. But building on a 1978 diplomatic statement banning concurrent tests, U.S. and Soviet representatives in 1982 provided for exceptions: The Soviets would be allowed to turn their air defense radars on during an ABM test if an unidentified aircraft was detected, for example. The Soviet ABM test range is close to the border with China. Under the understanding, the Soviet Union would have had to notify the commission at the next twice-yearly meeting that it operated the radar during an ABM test.

That negotiated procedure was questioned by the Office of the Defense Secretary, which charged that it gave the Soviet Union a loophole. An official said the office argued that notification should occur within 10 days, but the Soviets questioned the change in the understanding.

As it turned out, the Soviet downing of the South Korean airliner in September 1983 blocked consummation of the understanding. After that incident, U.S. representatives initially indicated that the United States was not prepared to sign the agreement but gave no reason why. More recently, they took the position that notification should be given at the next commission meeting or within 30 days. The issue may be taken up at the commission meeting this month.

Another case the Administration has cited concerns evidence that Soviet Union may have developed a mobile land-based ABM system or components of it. This case turns in part on a dispute over the "flat twin," an engagement radar that sources say could be moved and made operational over a period of weeks or months. The treaty bans mobile components. The Defense Department took an accusatory approach and the State Department stressed the ambiguous nature of the charge and questioned whether the transportable nature of the radar meant it was mobile under the treaty's terms.

A third case cited by the Administration concerns the SA-12, a Soviet surface-to-air missile. Administration hard-liners have suggested that the Soviet Union may be trying to give the missile the capability to shoot down warheads carried by intercontinental ballistic missiles.

The Soviet Union has never tested the SA-12 against a reentry vehicle carried by an intercontinental missile. But sources say the system has been tested against the Scaleboard, a short-range Soviet ballistic missile, which some hard-liners say follows a similar flight trajectory to that of older sea-launched ballistic missiles. As a result, they contend, the Soviets have breached the ABM treaty by testing in an "ABM mode."

But State Department officials have maintained that there is a qualitative difference between a test against an intercontinental reentry vehicle and one carried by a short-range missile, noting that the treaty allows tests against short-range tactical missiles. They also have argued that U.S. submarine missiles have a much longer range than the older missiles and that their warheads would enter the atmosphere with a greater velocity.

ABM role," said an Administration official familiar with the intelligence assessments. One reason for the judgment, the official said, is that the radar "does not cover the path of incoming U.S. ICBMs [intercontinental ballistic missiles] because it is too far east and is pointing in the wrong direction." *(See map, p. 526.)* This has led U.S. officials to conclude that the facility is an early-warning radar, whose primary function is to provide early warning of a missile attack, and not an ABM battle management radar, which tracks warheads as they re-enter the atmosphere and guides interceptor missiles toward the warheads.

Administration officials familiar with this and other intelligence assessments also say that the radar operates at the wrong frequency to be a battle management radar and that the frequency at which it operates makes it more vulnerable to the "blackout" effect of a nuclear detonation—that is, the disruptive effects of nuclear explosives on sensitive radars. They also say the face of the radar is not at the optimal angle to perform a battle management function and it is not "hardened," as battle management radars are. They also note that it is not defended by interceptor missiles and that there are no interceptor missiles, associated radars or other ABM-related items near the facility.

British intelligence experts have also taken a less alarmist view of the new Soviet radar and have concluded that it is "unlikely" that it can serve in an ABM battle management role. That judgment is contained in a Jan. 25 report of the Cabinet Joint Intelligence Commmittee, entitled "Soviet Union: the Abalakovo Radar." (Abalakovo is a small town near Krasnoyarsk where the new radar is located.)

That report, which is currently circulating within the Administration and which draws on the CIA assessment, has also not been previously reported. Although the British report suggests that the facility functions as an early-warning radar, it also found "plausible" Soviet assertions that the radar will also be used for space tracking purposes given projections of manned Soviet space flights in the late 1980s and 1990s.

These intelligence reports do not mean that the Soviet Union may not have violated technical provisions of the ABM treaty that pertain to the location of new phased-array radars, which are technically superior to older radars. Even if the radar is designed to serve as an early-warning alert to Soviet military leaders of a U.S. attack and does not—as the U.S. intelligence reports suggest—have important ABM battle management capability, its placement at Krasnoyarsk would

breach important provisions of the agreement, which is still legally in force.

But the intelligence reports suggest that the nature of the alleged violation, while serious, may have been exaggerated by some defense hard-liners.

COMPLIANCE OR NOT

The issue of Soviet compliance has long been a battleground for moderates and hard-liners, who still remain sharply split over arms control issues.

The drafting of the recent White House report on Soviet "noncompliance" revealed important differences, particularly between the Defense and State Departments, on ABM and other compliance issues. *(See box, p. 524.)*

State and Defense Department officials, differ, for example, over whether Soviet SS-16 missiles have been deployed at the Plesetsk test range in violation of the unratified second Strategic Arms Limitation Treaty (SALT II). The State Department and the Joint Chiefs of Staff have noted the ambiguous nature of the evidence at hand, while civilian Pentagon officials have taken a harder line, an official reported. The White House report noted that the evidence was "somewhat ambiguous" but called it a "probable violation."

But Krasnoyarsk is different. It represents one of the few cases in which both Administration moderates and hard-liners have charged the Soviet Union with a violation of the ABM treaty—the issue in dispute being the military significance of the violation.

The Krasnoyarsk radar came to the attention of Administration policy makers in 1983, according to Perle. And officials quickly came to the judgment that the radar was almostly certainly a violation of the ABM treaty—a conclusion based on its location at Krasnoyarsk, in central Siberia, and on the direction that the radar is aimed.

The treaty allows each side to defend a single site with a battle management radar and 100 interceptor missiles. The Soviet Union has chosen to defend Moscow with two ABM radars and 24 smaller radars. Also under construction is the four-sided Pushkino ABM radar, an immense structure that the Pentagon says is 120 feet high and 500 feet wide. The United States at one time had maintained a similar though smaller four-sided phased-array radar near its Minuteman ICBM fields at Grand Forks, N.D., but had determined that such an ABM capability could be too easily countered; it no longer has an active ABM facility.

Although the treaty allows the defense of a single site, it seeks to block construction of other ABM battle management radars while not prohibiting the building of all phased-array radars, which can be also used for early warning of attack, arms control verification and space tracking. To this end, the treaty maintains that early-warning phased-array radars must be placed on the peripheries of U.S. and Soviet territories, where they are not close to missile fields that they could protect and where they are more vulnerable to attack. In addition, they must be oriented outward. This stipulation reduces the radars' ability to play an ABM battle management role.

But the treaty permits large phased-array radars used primarily for space tracking or verification to be located anywhere. Complicating the issue is the fact that such radars can sometimes serve several purposes. U.S. Pave Paws early-warning radars are also used for space tracking.

Unlike the Administration, the U.S. intelligence community has described the Soviet radar in Siberia in less than ominous terms.

The Krasnoyarsk radar is located some 500 miles from the Soviet border with Mongolia, and its single face is directed east across 6,000 miles of Soviet territory toward the northern Pacific.

U.S. representatives have asked the Soviets to stop construction of the radar pending resolution of the issue—a request conveyed at confidential meetings of the Standing Consultative Commission, established by the SALT I and SALT II accords to deal with compliance issues. The Soviet Union has maintained that the facility is for space tracking and verification, which would make the radar permissible under the ABM treaty.

But this argument is largely discounted by the Administration, which has maintained that the radar may have some space tracking capabilities but was designed primarily for other purposes. "You don't need to build something several football fields large" to provide that capability, said a senior Administration official. "It is clear that is not designed for that because the screen of the radar is not most propitious for space tracking."

Significantly, some arms control experts who have been highly critical of the Administration's policies consider the radar to be a probable violation of the ABM accord. "It looks like a serious compliance issue," said Sidney D. Drell, deputy director of the Stanford Linear Accelerator Center at Stanford University, who added that he did not find very persuasive the Soviet argument that the radar is intended for space tracking.

U.S. officials, however, acknowledge that the British intelligence community has attached more credence to the Soviet assertions that the radar can perform a space tracking role.

EARLY WARNING?

But if the radar is not for space tracking, what is its military significance?

Reviewing the list of allegations in the Administration's latest report on Soviet "noncompliance," Kenneth L. Adelman, director of the Arms Control and Disarmament Agency, said in an interview, "You could say that none of these violations in and of themselves have immediate and profound military significance."

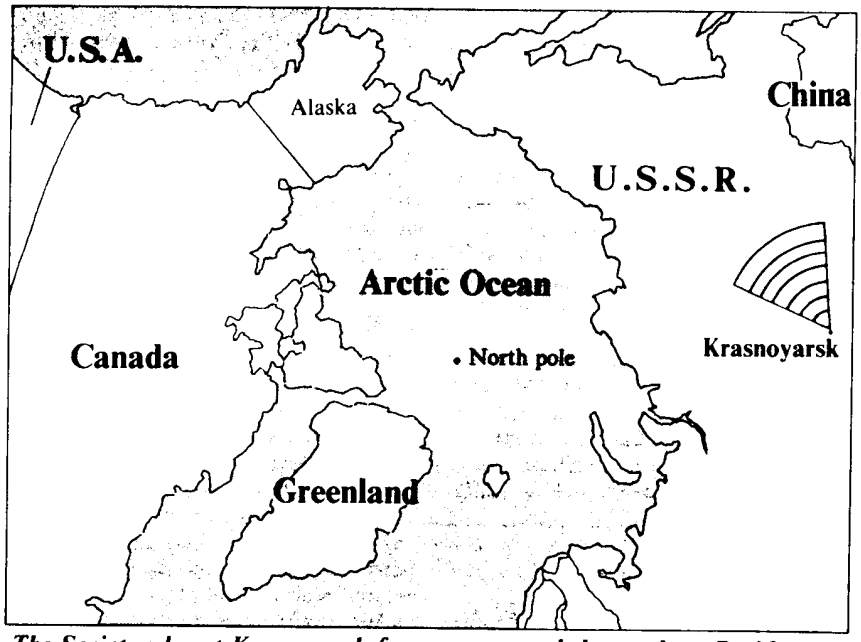
Adelman compared the alleged violations to "a taxpayer violating income tax laws. Even though the failure of a single taxpayer to pay may have no monetary significance for reducing the deficit, the failure to prosecute tax evaders will lead to a breakdown of the tax system."

But a senior official argued that the Krasnoyarsk radar has ABM "potential" because it is near Soviet missile fields, specifically SS-18 missiles.

Moreover, the Administration, in the classified version of last year's report to Congress on Soviet "noncompliance," gave some credence to theories that the radar could be used for ABM battle management. It noted that the location of the radar at Krasnoyarsk made it "more appropriate" for ABM purposes than for early warning of a U.S. attack. By placing the radar in central Siberia instead of on the periphery of Soviet territory, the report stated, the Soviets had sacrificed about six minutes of warning time.

But the report also noted that while Krasnoyarsk and five other large phased-array radars "probably have the size and the power to perform a battle management support role, we cannot ascertain whether they have the necessary data-processing capacity, and uncertainties remain about their actual performance characteristics."

But now some Administration officials familiar with intelligence on the radar have expressed a much more benign interpretation and maintain that the facility is an early-warning radar designed to plug a gap in Soviet radar coverage. They note that the radar has a single face, unlike the four-sided battle management radar near Moscow, and looks only toward the northern Pacific, from which U.S. Trident submarines could fire missiles at the Soviet Union.



The Soviet radar at Krasnoyarsk faces east toward the northern Pacific.

According to this argument, the Soviet Union could have filled the gap in its radar coverage by building two or more radars nearer the periphery of its territory. But it elected not to do so to save funds and to avoid having to construct the radars in an inhospitable and relatively inaccessible region of Siberia.

A congressional expert who has access to intelligence reports said: "What it does is fill a gap left in the north Pacific. One can speculate that part of the problem was that they did not want to build two instead of one in a miserable location. If they had spent a few more bucks, they could have built the facilities and have been fully in compliance. In form, fit and function, the Krasnoyarsk radar is essentially the same as other early-warning radars. They would need a different type of radar to handle the engagement phase of an attack."

Expressing this interpretation is the CIA-prepared report on the Soviet facility. It notes that the Krasnoyarsk radar does not provide coverage of the "ICBM attack corridor," according to an Administration official familiar with the report. In a nuclear conflict, Minuteman or MX missiles would fly over the North Pole and attack Soviet missile silos from the North. So the Krasnoyarsk radar would be better suited as an ABM system if it were located further to the West and were facing the attacking missiles.

The British intelligence report found it was "unlikely" that the radar would serve as the basis of an ABM system. It said that such a system would be extremely vulnerable to the blackout effects of nuclear detonations—an argument also made in the CIA report. The British report also noted that there were no interceptor missiles near the facility or any infrastructure near the facility that would imply an emerging ABM capability—a point reaffirmed by U.S. officials.

An Administration official said that the lower frequencies of the Krasnoyarsk radar will make it better for target detection at great distances but not as good as higher-frequency ABM radars for making precise predictions about where warheads will land.

The argument that the Krasnoyarsk radar is intended for early warning is also supported in an analysis by the U.S. intelligence community of the low angle at which the radar's face is placed. "If you try to maximize the detection range, you have to point the face of the radar pretty close to the horizon to compensate for the spherical nature of the earth. But if you are in the engagement mode, looking close to the horizon is not going to help you with RVs [warheads] coming in at an angle of 35 and 30 degrees," said a congressional source.

In addition, some officials have questioned whether the Soviets obliquely tried to signal their intention to build a new early-warning facility.

Some who argue that the Soviets may have tried point to classified proceedings of the Standing Consultative Commission. In an Oct. 23, 1981, session, the Soviet representative responded to U.S. concerns about the location of other Soviet phased-array radars by insisting that they were consistent with the treaty and that the placement of the radars also had to take account of "technical and practical considerations involved in their placement," an assertion repeated in 1982.

"Some people in retrospect think that they [Soviet representatives] made statements in the [Standing Consultative Commission] that might have been an explanation for what was coming up. But it was very abstract and does not fit with the actual radar," said a senior Administration official.

Some Pentagon officials concede that the Krasnoyarsk installation is an early-warning radar and not an ABM battle management radar but say that it is still troubling from a military point of view. "It may be an early-warning radar in the wrong place," said an official. "But its placement allows the Soviets more time to track the RVs for several more minutes than if it was on the periphery. It might be able to hand off information to an engagement radar."

Former Defense Secretary Harold Brown, in a Feb. 28 talk at the Johns Hopkins University School of Advanced International Studies, said the facility was "an early-warning radar that is located in the wrong place. I do not think that is is a great threat to U.S. security because I do not think that it has that much capability."

THE TREATY'S FUTURE

Still, establishing that the Krasnoyarsk facility is an early-warning radar does not let the Soviet Union off the hook because it would still constitute a technical violation of the treaty.

Turning a blind eye to the radar, U.S. officials say, would set a dangerous precedent that would allow construction of radars that are more worrisome. It could also encourage a process whereby each nation chips away at the ABM treaty and searches for ingenious loopholes.

The Soviet Union has already charged the United States with some breaches of the treaty for planning to build two Pave Paws early-warning radars in Texas and Georgia. The systems are oriented outward and are designed to provide warning of a submarine missile attack. John B. Rhinelander, one of the U.S. drafters of the ABM treaty, argues that the radars' 240-degree coverage means that they will span U.S. territory and raises the issue of whether they are a technical violation or might be seen by the Soviets as ABM-related.

"I worry that rather than a deliberate abrogation of the treaty, the treaty might stop being observed on the two sides," Brown said. "Each side may go further and further over the edge and make its own interpretations, and after a while you would have a meaningless piece of paper. I do not think that is what the Administration intends to happen, but it could happen." □